

REMARKS

This is in response to the non-final Office Action dated October 9, 2007, in which claims 1, 3-4, 10, 12, 14, 16-18, 23-32, 34-35, 38, 40-41, 47, 49, 51, 53-55, and 60-69 were rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement, and were further rejected under the second paragraph as being indefinite; claims 1, 3-4, 16, 34, 35, 38, 40, 41 and 53 were rejected under 35 U.S.C. 102(b) as being anticipated by GB 818,151; claims 1, 3-4, 10, 16-18, 24-28, 30, 32, 34-35, 38, 40-41, 47, 53-55, 61-65, 67 and 69 were rejected under 35 U.S.C. 103(a) as being unpatentable over Steindorf (US 5,340,501); claims 10, 17, 18, 24-28, 30, 32, 47, 54, 55, 61-65, 67 and 69 were rejected under 35 U.S.C. 103(a) as being unpatentable over GB '151 in further view of Steindorf; and claims 12, 14, 23, 29, 31, 49, 51, 60, 66 and 68 were rejected under 35 U.S.C. 103(a) as being unpatentable over Steindorf or GB '151 in further view of Rolando et al. (US 5,876,514).

With this Amendment, claims 1, 3-4, 34, 35, 38 and 40-41 have been amended. In reliance on the following remarks, the present application with pending claims 1, 3-4, 10, 12, 14, 16-18, 23-32, 34-35, 38, 40-41, 47, 49, 51, 53-55, and 60-69 is in condition for allowance, and reconsideration and notice to that effect are respectfully requested.

Claim Rejections Based on 35 U.S.C. 112, First Paragraph

In the Office Action, claims 1, 3-4, 10, 12, 14, 16-18, 23-32, 34-35, 38, 40-41, 47, 49, 51, 53-55, and 60-69 were rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. Specifically, the Office Action stated that the term "at least" in the limitation "a ratio of HEDTA to water by weight is at least about 3:1," had no upper limit and thus would cause the claims to read literally on embodiments outside the ranges disclosed in the specification. Independent claims 1, 34, and 38 have now been amended with a limitation requiring the cleaning composition now include water constituting "at least about 5% by weight of the total weight of the solid cleaning composition," in addition to HEDTA constituting about "25% to about 93% by weight" of the total weight of the solid cleaning composition. These amendments

provide an upper limit for the ratio of HEDTA to water which is fully supported by the specification. For example, about 93 % by weight of HEDTA to about 5 % by weight of water is supported by Example N1 (ratio of HEDTA to water by weight = 18:1), which formed a hard tablet. Therefore, it is respectfully submitted that independent claims 1, 34, and 38 as amended comply with the written description requirement, the same holding true for claims 3-4, 10, 12, 14, 16-18, 23-32, 35, 40-41, 47, 49, 51, 53-55, and 60-69 which depend therefrom.

Claim Rejections Based on 35 U.S.C. 112, Second Paragraph

In the Office Action, claims 1, 3-4, 10, 12, 14, 16-18, 23-32, 34-35, 38, 40-41, 47, 49, 51, 53-55, and 60-69 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, the Office Action stated that the recitation "cleaning agent" in claims 1, 34, and 38 read on most of the recited functional ingredients, and that the recited members of a Markush group must be mutually exclusive based on the rationale of *Ex parte Clark*, 174 USPQ 40 (BPAI 1971). Independent claims 1, 34 and 38 have been amended to no longer recite the term "cleaning agent," with the understanding that, as the Office Action pointed out, many of the other functional ingredients recited in the group are considered of the category of "cleaning agents," and thus the applicant does not consider this amendment to narrow the scope of the claims. In light of the amendments, it is respectfully submitted that independent claims 1, 34, and 38 comply with 35 U.S.C. 112, second paragraph, the same holding true for claims 3-4, 10, 12, 14, 16-18, 23-32, 35, 40-41, 47, 49, 51, 53-55, and 60-69 which depend therefrom.

Claim Rejections Based on 35 U.S.C. 102(b)

In the Office Action, claims 1, 3-4, 16, 34, 35, 38, 40, 41 and 53 were rejected under 35 U.S.C. 102(b) as being anticipated by GB 818,151. Specifically, the Office Action stated that GB '151 teaches a detergent composition comprising HEDTA and water, wherein the weight ratio of HEDTA to water ranges from 4:1 to 2:1, thus overlapping the at least 3:1 ratio of the claims. As

amended, independent claims 1, 34 and 38 require a ratio of HEDTA to water of at least 5:1, with HEDTA constituting at least 25% by weight of the total weight of the solid cleaning composition, neither of which are taught by GB '151. Support for this amendment can be found in the specification, which shows in Table 3 that formulations with HEDTA:H₂O ratios by weight of at least 5.06:1 or greater all formed solid tablets (as discussed in para. 0099 and 0100 of the printed publication). Additionally, dependent claims 3 and 35 have been amended to recite ratios of HEDTA to water by weight of 6:1 (supported by Example A1), and dependent claims 4 and 41 have been amended to recite HEDTA constitute about 30 to about 93% by weight of the of the total weight of the solid cleaning composition (also supported by Example A1, in addition to N1). It is therefore respectfully requested that the rejection of independent claims 1, 34 and 38, in addition to claims 3-4, 16, 35, 40 and 41 which depend therefrom, be withdrawn and those claims allowed, as the amended ratios are not taught by GB '151.

Claim Rejections Based on 35 U.S.C. 103(a)

In the Office Action, claims 1, 3-4, 10, 16-18, 24-28, 30, 32, 34-35, 38, 40-41, 47, 53-55, 61-65, 67 and 69 were rejected under 35 U.S.C. 103(a) as being unpatentable over Steindorf (US 5,340,501) based partly on rationale set forth in the previous Office Action. Additionally, the Office Action concluded that a prima facie case of obviousness existed because the claimed ranges overlapped or lay inside the ranges disclosed by Steindorf (HEDTA:water weight ratio of 3:1 or greater lay inside of Steindorf's disclosure of HEDTA:water weight ratio of 40:9, or 4.44:1 in claim 5), and with respect to the specific claimed ratio of 3:1 or greater, it was argued that it is obvious to select a value in a known range by optimization for best results. As for the optimization results, the Office Action then stated that a patent would not be granted based upon the optimization of result effective variables when the optimization is obtained through routine experimentation unless there is a showing of unexpected results to rebut the prima facie case of obviousness.

Independent claims 1, 34 and 38 as amended now require a ratio of HEDTA to water of at least about 5:1, which does not overlap or lie inside the ranges disclosed by Steindorf.

Therefore it is respectfully submitted that the prima facie case of obviousness is rebutted with these amendments. The currently claimed ratios are fully supported by the specification, which shows in Table 3 that formulations with HEDTA:H₂O ratios by weight of at least 5.06:1 or greater all formed solid tablets (as discussed in para. 0099 and 0100 of the printed publication). Further support can be found in the specification for formulations A1 (6:1 ratio), Control (9:1 ratio), M1 (14.2:1 ratio) and N1 (18:1 ratio), all of which formed hard tablets.

It would not have been obvious for one skilled in the art to make formulations of HEDTA and water for binding other functional cleaning ingredients as currently claimed because no evidence has been provided thus far that HEDTA was formerly used by those skilled in the art as anything other than a chelating agent in cleaning compositions. As for solidifying agents, Steindorf specifically gives a list of solidifying agents that do not include aminocarboxylic acids like HEDTA (see column 4, lines 9-45), and mentions HEDTA in a separate section as specifically a chelating agent (see column 3, lines 26-59). Therefore, it was an unexpected result that HEDTA itself could act as a binding/solidifying agent when mixed in the proper ratios with water, those ratios most optimal for resulting in solidification of cleaning compositions now reflected in the amended claims. Furthermore, the references relied on in the Office Actions thus far have listed HEDTA as simply one of many aminocarboxylic acid chelating agents that can suitably be used in cleaning compositions. (See, for example, Steindorf, column 3, lines 38-44, or the various compositions of GB '151). However, what was surprising about the applicant's discovery is that only formulations containing HEDTA and water hardened into a solid composition, whereas the exact same formulation with EDTA substituted for HEDTA did not harden. This led the applicant to perform a differential scanning calorimetry (DSC) analysis on compositions containing HEDTA, the results of which supported the discovery that HEDTA and water formed a solid binding agent. No prior art of record has even remotely suggested to one skilled in the art that HEDTA, provided in the proper ratios, would act uniquely as a binding agent for solidification of cleaning compositions in this manner, unlike other aminocarboxylic acids that are typically mixed into these compositions as chelating agents. Therefore, it is respectfully submitted that it would not have been obvious for one

skilled in the art to have used HEDTA as a binding agent and to have found the currently claimed ratios of HEDTA to water by weight that could lead to the proper solidification of cleaning compositions, and thus independent claims 1, 34, and 38 should be allowed, in addition to claims 3-4, 10, 16-18, 24-28, 30, 32, 35, 40-41, 47, 53-55, 61-65, 67 and 69 that depend therefrom.

In that independent claims 1, 34, and 38 are in condition for allowance, the rejection of dependent claims 10, 17, 18, 24-28, 30, 32, 47, 54, 55, 61-65, 67 and 69 as being unpatentable over GB '151 in further view of Steindorf, and dependent claims 12, 14, 23, 29, 31, 49, 51, 60, 66 and 68 as being unpatentable over Steindorf or GB '151 in further view of Rolando et al. (US 5,876,514), should be withdrawn and those claims allowed.

Conclusion

In view of the foregoing, pending claims 1, 3-4, 10, 12, 14, 16-18, 23-32, 34-35, 38, 40-41, 47, 49, 51, 53-55, and 60-69 are in condition for allowance. Notice to that effect is respectfully requested.

The Commissioner is authorized to charge any additional fees associated with this paper or credit any overpayment to Deposit Account 11-0982.

Any inquiries regarding this application should be directed to David R. Fairbairn at (612) 337-9357.

Respectfully submitted,

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